

Winrock International: Appropriate Technologies and Women's Productivity in Ethiopia

In 1996, the Office of Women in Development of the United States Agency for International Development launched a five-year project known as the Women in Development Technical Assistance Project (WIDTECH) to support gender integration in development policies and programs. WIDTECH's experience has underscored why it is important to ensure that women are equal participants in development, and how this can be accomplished. WIDTECH's small grants program provided 27 grants worth nearly \$475,000 to non-governmental and community-based organizations worldwide. The following describes one of these projects, offering insights into the many ways that women are improving their lives and well-being, as well as those of their families, communities, and nations. Please visit www.widtech.org for more information on this and other WIDTECH small grants.

Appropriate technology is an integral part of our lives. Generally viewed as a way to boost productivity and ease the burden of workers, technology plays a role in development in most settings, from industrialized urban centers to rural villages. Access to and training in the use of small-scale technology has the potential to greatly enhance quality of life and work for many women.

Rural Ethiopian women are involved in all aspects of farming, including planting, sowing, applying fertilizer, harvesting, and livestock production. They are also responsible for the processing, transporting, storing, and marketing of food. In addition, women spend a good part of their long day carrying out household chores, such as gathering wood and dung for fuel, fetching water, grinding grain, and cooking.

Information on the types of technologies developed for and adopted by women is sorely lacking, as is evidence of their appropriateness or success. In 2001, a small grant was given to Winrock International Ethiopia (WIE) to close this information gap. The central goal of the project was to examine and document the development, dissemination, types, and use of appropriate technologies, and to analyze the extent to which tech-

nologies were adopted by the intended beneficiaries and the impact that technologies had on women's lives. Appropriate technologies included products to aid in fuel and water collection and food harvesting and processing, such as pumps, crop storage systems, efficient or smokeless stoves, food driers, grinding mills, dehuskers, butter churners, beehives and honey extractors, and transport vehicles such as trailers and carts.

The project was carried out in communities located in the Amhara National Regional State (ANRS) and the Southern Nations Nationalities and Peoples Regional State (SNNPRS), both of which are key producing regions composed largely of family farms.

Both qualitative and quantitative methods were used to research the technologies, including a literature review; a survey of rural technology centers, research organizations, higher education institutions, and governmental and non-governmental organizations; interviews with and questionnaires distributed to 160 women farmers; focus-group discussions; statistical and content-related data analysis; and a one-day workshop on women and appropriate technologies for farmers, government officials, and organizational representatives.

Improving Lives with Fuel-Efficient Stoves

In 1997, the German Cooperation Agency (GTZ) and the Ethiopian Ministry of Agriculture launched a collaborative effort to promote fuel-efficient Mirt stoves. To date, 21 men and 19 women have been trained in stove production, business management, and marketing, and 6,000 stoves have been commercially installed. The project's success is evident in the story of Wizro Tiruwork, who is married with three children.

In April 2001, Wizro Tiruwork took out a loan to produce Mirt stoves, and soon received orders through the regional Women's Affairs Office for 500 stoves. Together with a colleague, she made the stoves using purchased red ash and cement, as well as sand from a nearby river. The orders were filled on time and customers were satisfied.

She enjoys her new job, is grateful for the skills she has gained, and has used the money she earned to finish building her family's house. She hopes to make modifications to Mirt so that more local materials can be used and prices can be lowered, which would in turn both increase sales and make the stoves more affordable for low-income women.

Findings and Results

- Technology development is not driven primarily by farmers' knowledge or their perceived needs, but rather by imported prototypes and the views of technology promoters.
- Technology development is biased in terms of socioeconomic class, with more attention given to those who can afford the technologies.
- It is widely assumed that women will benefit from the technologies, but no special effort is made to address their particular needs and priorities.
- The majority of women who use technologies most of the time are younger than 49 years, illiterate, and married with large families.
- Most women consider fuel wood collection and water hauling to be their most difficult tasks, followed by processing (e.g., grinding).
- Many women still use clay pots to carry water, inefficient stoves, and rudimentary tools for crop processing. Among those who do use appropriate technologies, preferences are for fuel-saving and water-hauling devices, carts, and processing devices.
- The primary reasons for low usage of appropriate technologies include limited distribution systems,

insufficient awareness among women of the technologies, high cost, and lack of coordination, training, and attention to the specific needs of women.

- Women are also marginalized in technology transfer because of a lack of time and regulations that prohibit their membership in associations and cooperatives. However, women's membership in informal groups offers opportunities for information and training.

Conclusions

A project supported by the Winrock small grant illustrated the persistent gap between the needs of women and both the types of technology developed and the extent of their dissemination. One of its major contributions is a detailed catalogue of women's technology needs. Another positive effect was that the women farmers who participated in the study became aware of the existence of appropriate technologies and had an opportunity to share their knowledge. Similarly, developers and promoters of technology became more aware of gender-related trends and issues and the specific needs and problems of women.

The workshop that followed the study brought together a wide range of farmers, professionals, government officials, and technical experts, who together developed concrete recommendations for follow-up and policy development and implementation. In large part because of the work of Winrock and its partners, it is increasingly recognized in Ethiopia that women's time and labor burdens are not adequately addressed, but that appropriate technologies present an opportunity to do so. A strong foundation for new strategies and programs to improve the lives and well-being of women farmers has now been established.

Bibliography

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